

ment consisted in the inhalation of five drops of nitrite of amyl twice daily until the cure was complete.

Commenting on this case, Dr. Forbes offers the following as his theory of the pathology of the disease. He says: "We learn that tetanus is the result of an augmented disintegration of muscular tissue; that the products of this disintegration, lactic acid and kreatine, further excite the nervous peripheries until, by reflex action, there is established a violent and painful contraction of the voluntary muscles, which is long-continued and heretofore uncontrollable; that in traumatic tetanus the augmented disintegration of muscular tissue is caused by an increased excitation of the nerve peripheries exposed; that in idiopathic tetanus there is a self-generated power akin to the poison of rabies and to strychnia, exciting the nerve peripheries, which, by reflex action, causes the augmented disintegration of muscular tissue, and the products of disintegration, lactic acid and kreatine, which further excite the nerve peripheries until there is established the condition known as tetanus.

"Impressed with this as the pathology of tetanus, the appropriate treatment should be the use of those agents which are known to prevent the disintegration of tissues, which will lessen the irritated nerve peripheries, which will sustain nutrition and advance the elimination of the morbid products.

"The *modus operandi* of the nitrite appears to be by arresting the process of oxidation in the tissue, and the same reasons which lead to its use in tetanus—namely, to prevent the disintegration of tissue, and to lessen the irritated nerve peripheries while nature is eliminating the morbid products—should also cause it to be employed in hydrophobia."

ESERINE IN CHOREA.—Bouchut, in an extended paper in the *Bull. Gen. de Therapeutique*, goes over the whole subject of the therapeutic action of eserine, with special reference to its employment in chorea in children. He gives in brief the results of treatment by this agent, of twenty-four cases of this disease, and sums up as follows:

En résumé, after four hundred and thirty-seven observations of eserism produced in children by moderate doses, we observe that eserine acts on the muscular contractility, which it decreases, and on the contractility of the small vessels, which it augments.

Eserine, or sulphate of eserine, may be administered by hypodermic injections, or by the stomach, and it ought to be given fasting.

Under the form of subcutaneous injections, eserine or its sulphate may be injected in doses of from three to five milligrammes; for, from the symptoms, I think it ought not to be given in greater quantity.

By injection, the action is very energetic, and the dose should not be half as large as when given by the stomach.

The action of eserine lasts from one to two or three hours, and then is entirely exhausted, permitting thus the dose to be renewed, so that in three or four during the day, fifteen or twenty milligrammes may be used.

Eserine given to children, produces its effects in a few minutes, but more quickly when given by injections, than when administered by the mouth.

In doses of from three to five milligrammes, the effects of eserine are constant; I have only seen three children in whom they failed,

Usually, eserine causes paleness, with narrowing of the pulse, sometimes followed by retardation.

Nearly all the children treated with eserine, have suffered from *malaise*; have complained loudly of epigastric distress, with gastralgia, nausea, and expectoration of watery, glutinous matter.

Eserine sometimes causes bilious vomiting.

It does not alter the bodily temperature.

It has in no case, in the doses I have indicated, produced either colic or diarrhoea.

Given internally, eserine leaves the pupil in its normal condition of contractility; it is only exceptionally otherwise.

Eserine often causes a rather marked perspiration of the face and body.

Paresis of the diaphragm, and even its temporary paralysis, are the most serious and painful symptoms observed after the injection of five milligrammes of eserine.

When the drug has exhausted its action, the children take on their usual condition; there seem to be no after effects.

Eserine is not found in the urine after the employment of the small doses I have indicated.

Administered in cases of chorea, eserine arrests the choreic movements during the time of its action, and gradually moderates them in the interval, in such a manner as to cure the disease in an average period, which I have estimated to be ten days.

The effects of the eserine in chorea, are more certain when given hypodermically, than when given by the mouth.

I have never seen eserine produce tremor or convulsions, and it is probable that these accidents can only be caused by massive and toxic doses.

REST IN TETANUS.—Dr. Renzi (*Gazetta Medica Italia Prov. di Ven.*) finds that, both in animals and human beings attacked by tetanus, light renders the tetanic contractions more frequent and more intense. It may, likewise, be experimentally demonstrated on animals, that absolute rest and the absence of every cause of excitement render tetanus less violent and less fatal. Of three cases of acute tetanus in which complete rest alone was employed, two were cured. The patients were placed in a perfectly dark and isolated room; every noise and excitement was avoided; and the patients were only visited at long intervals to give them drink. In the fatal case, hydrate of chloral had been administered in the form of injection, and seemed to still further impede the respiration, already affected by the progress of the disease (*British Med. Journal*, May 29).

ALCOHOL.—A. Schmidt (*Centralblatt f. d. Med. Wissensch.*, No. 23) gives an account of a series of ten experiments performed by him in the laboratory of Prof. Binz, of Bonn, as to the elimination of alcohol by the lungs. The